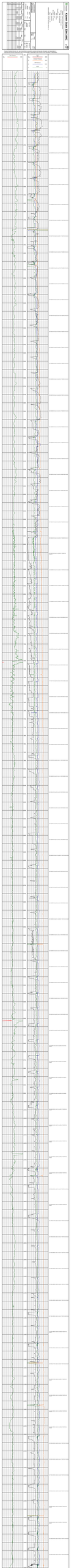

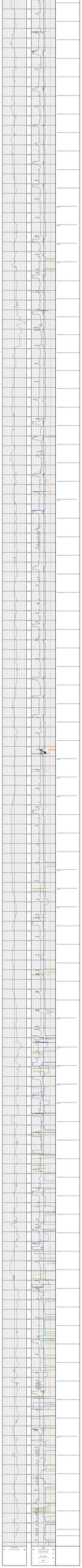

Keown State 33N-34HZ

MD
2":100'

Precision
Directional Services

Company: Anadarko Petroleum Corporation
Well Name: Keown State 33N-34HZ
API: 05123429910000
County/Parish: Weld
State: Colorado
Country: USA
Job number: GC-170010
Field: Wattenberg
Rig Id: Sidewinder 105
Survey Company: Precision Directional Services, Inc.

Log measurements:
Depth measured from:
Maximum temperature:

	Depth	Date
Start:	0 ft	2/6/17
End:	ft	

Casing	**Depth**	**Size**
Surface:	2330 ft	9 5/8"
Intermediate:		5 1/2"

Mud Type:
Density:
Viscosity:
Rm: **Rmf:** **Rmc:**

Elevations
KB: 4904 ft
GL: 4874 ft
DF: 30 ft

Run	**Bit Size**	**Offsets**		**Depths**		**Dates**	
		Gamma	**Survey**	**Start**	**End**	**Start**	**End**
1	13.5"		64.00 ft	0 ft	1510 ft	2/4/17	2/4/17
2	13.5"		64.00 ft	1510 ft	2353 ft	2/4/17	2/5/17
3	8.5"	41.00 ft	54.00 ft	2353 ft	18140 ft	2/9/17	2/16/17
4	8.5"	41.00 ft	54.00 ft	18140 ft		2/16/17	
5							
6							
7							
8							
9							
10							

Precision Directional Services, Inc. uses its best efforts to provide its customers with accurate information and interpretations in conjunction with services performed but will not be held liable or responsible for the accuracy of such information or interpretation.

#39 MD(3820.00) Inc(6.2) Azm(265.6) TVD(3795.52) DLS(0.8)

#40 MD(3916.00) Inc(7.3) Azm(267.0) TVD(3890.86) DLS(1.1)

#41 MD(4011.00) Inc(8.2) Azm(269.3) TVD(3985.00) DLS(1.0)

#42 MD(4107.00) Inc(7.4) Azm(265.9) TVD(4080.12) DLS(1.0)

#43 MD(4202.00) Inc(6.0) Azm(263.8) TVD(4174.47) DLS(1.5)

#44 MD(4298.00) Inc(5.9) Azm(272.3) TVD(4269.96) DLS(0.9)

#45 MD(4393.00) Inc(4.9) Azm(269.0) TVD(4364.54) DLS(1.1)

#46 MD(4489.00) Inc(4.5) Azm(269.9) TVD(4460.21) DLS(0.4)

#47 MD(4608.00) Inc(4.0) Azm(267.3) TVD(4578.89) DLS(0.5)

#48 MD(4703.00) Inc(4.1) Azm(295.2) TVD(4673.66) DLS(2.0)

#49 MD(4798.00) Inc(4.0) Azm(293.7) TVD(4768.42) DLS(0.1)

#50 MD(4894.00) Inc(2.6) Azm(301.6) TVD(4864.26) DLS(1.5)

#51 MD(4990.00) Inc(0.8) Azm(274.5) TVD(4960.22) DLS(2.0)

#52 MD(5085.00) Inc(0.9) Azm(272.9) TVD(5055.21) DLS(0.1)

#53 MD(5181.00) Inc(1.3) Azm(171.6) TVD(5151.20) DLS(1.8)

#54 MD(5276.00) Inc(0.9) Azm(173.8) TVD(5246.18) DLS(0.4)

#55 MD(5372.00) Inc(1.0) Azm(165.0) TVD(5342.16) DLS(0.2)

#56 MD(5467.00) Inc(0.9) Azm(159.1) TVD(5437.15) DLS(0.1)

#57 MD(5563.00) Inc(1.1) Azm(146.9) TVD(5533.14) DLS(0.3)

#58 MD(5658.00) Inc(1.2) Azm(153.5) TVD(5628.12) DLS(0.2)

#59 MD(5754.00) Inc(1.2) Azm(146.8) TVD(5724.10) DLS(0.2)

#60 MD(5849.00) Inc(1.4) Azm(151.2) TVD(5819.07) DLS(0.3)

#61 MD(5945.00) Inc(1.4) Azm(153.6) TVD(5915.04) DLS(0.1)

#62 MD(6040.00) Inc(0.9) Azm(347.1) TVD(6010.03) DLS(2.5)

#63 MD(6136.00) Inc(1.2) Azm(342.0) TVD(6106.02) DLS(0.4)

#64 MD(6231.00) Inc(0.7) Azm(15.6) TVD(6201.00) DLS(0.8)

#65 MD(6327.00) Inc(0.6) Azm(25.7) TVD(6297.00) DLS(0.1)

#66 MD(6422.00) Inc(0.5) Azm(191.1) TVD(6392.00) DLS(1.2)

#67 MD(6517.00) Inc(0.2) Azm(198.5) TVD(6486.99) DLS(0.3)

#68 MD(6613.00) Inc(1.4) Azm(326.5) TVD(6582.98) DLS(1.7)

#69 MD(6708.00) Inc(14.1) Azm(342.6) TVD(6676.92) DLS(13.4)

#70 MD(6804.00) Inc(22.3) Azm(344.3) TVD(6768.05) DLS(8.5)

#71 MD(6899.00) Inc(30.0) Azm(349.9) TVD(6853.29) DLS(8.5)

#72 MD(6995.00) Inc(35.6) Azm(354.9) TVD(6933.97) DLS(6.5)

#73 MD(7090.00) Inc(41.4) Azm(1.9) TVD(7008.32) DLS(7.7)

#74 MD(7186.00) Inc(48.0) Azm(1.3) TVD(7076.49) DLS(6.9)

#75 MD(7281.00) Inc(55.3) Azm(359.8) TVD(7135.40) DLS(7.7)

#76 MD(7376.00) Inc(62.0) Azm(2.0) TVD(7184.80) DLS(7.4)

#77 MD(7472.00) Inc(69.9) Azm(3.6) TVD(7223.88) DLS(8.3)

#78 MD(7567.00) Inc(77.7) Azm(4.9) TVD(7250.37) DLS(8.4)

#79 MD(7663.00) Inc(88.6) Azm(3.7) TVD(7261.80) DLS(11.4)

#80 MD(7758.00) Inc(90.2) Azm(3.9) TVD(7262.81) DLS(1.7)

#81 MD(7854.00) Inc(89.3) Azm(3.8) TVD(7263.27) DLS(0.9)

#82 MD(7949.00) Inc(88.8) Azm(1.7) TVD(7264.83) DLS(2.2)

#83 MD(8045.00) Inc(90.2) Azm(1.1) TVD(7265.68) DLS(1.6)

#84 MD(8140.00) Inc(89.9) Azm(0.9) TVD(7265.63) DLS(0.3)

#85 MD(8235.00) Inc(89.6) Azm(0.6) TVD(7266.05) DLS(0.5)

#86 MD(8331.00) Inc(89.5) Azm(0.3) TVD(7266.79) DLS(0.3)

#87 MD(8426.00) Inc(91.4) Azm(0.1) TVD(7266.04) DLS(2.0)

#88 MD(8521.00) Inc(91.2) Azm(359.7) TVD(7263.86) DLS(0.4)

#89 MD(8617.00) Inc(90.8) Azm(0.9) TVD(7262.13) DLS(1.3)

#90 MD(8712.00) Inc(90.5) Azm(0.3) TVD(7261.02) DLS(0.8)

#91 MD(8807.00) Inc(90.3) Azm(0.2) TVD(7260.32) DLS(0.2)

#92 MD(8903.00) Inc(89.7) Azm(359.8) TVD(7260.32) DLS(0.8)

#93 MD(8998.00) Inc(90.1) Azm(1.2) TVD(7260.56) DLS(1.5)

#94 MD(9094.00) Inc(90.3) Azm(1.0) TVD(7260.27) DLS(0.3)

#95 MD(9190.00) Inc(90.7) Azm(0.7) TVD(7259.47) DLS(0.5)

#96 MD(9285.00) Inc(90.3) Azm(2.6) TVD(7258.64) DLS(2.1)

#97 MD(9380.00) Inc(88.8) Azm(2.2) TVD(7259.37) DLS(1.7)

#98 MD(9476.00) Inc(88.0) Azm(1.6) TVD(7262.05) DLS(1.0)

#99 MD(9572.00) Inc(88.6) Azm(0.8) TVD(7264.86) DLS(1.0)

#100 MD(9667.00) Inc(87.8) Azm(359.9) TVD(7267.83) DLS(1.3)

#101 MD(9763.00) Inc(90.0) Azm(359.8) TVD(7269.66) DLS(2.3)

#102 MD(9858.00) Inc(90.2) Azm(359.9) TVD(7269.51) DLS(0.2)

#103 MD(9954.00) Inc(89.4) Azm(358.9) TVD(7269.89) DLS(1.3)

#104 MD(10049.00) Inc(91.3) Azm(359.7) TVD(7269.34) DLS(2.2)

#105 MD(10144.00) Inc(90.7) Azm(359.4) TVD(7267.66) DLS(0.7)

#106 MD(10240.00) Inc(90.3) Azm(359.2) TVD(7266.76) DLS(0.4)

#107 MD(10335.00) Inc(89.9) Azm(359.2) TVD(7266.53) DLS(0.4)

#108 MD(10431.00) Inc(92.3) Azm(358.8) TVD(7264.61) DLS(2.6)

#109 MD(10526.00) Inc(92.7) Azm(0.2) TVD(7260.44) DLS(1.6)

#110 MD(10622.00) Inc(92.1) Azm(359.8) TVD(7256.40) DLS(0.7)

#111 MD(10717.00) Inc(92.1) Azm(2.3) TVD(7252.92) DLS(2.6)

#112 MD(10813.00) Inc(91.3) Azm(1.6) TVD(7250.10) DLS(1.1)

#113 MD(10908.00) Inc(91.1) Azm(1.6) TVD(7248.11) DLS(0.2)

#114 MD(11004.00) Inc(90.7) Azm(0.7) TVD(7246.56) DLS(1.0)

#115 MD(11099.00) Inc(90.2) Azm(0.3) TVD(7245.77) DLS(0.7)

#116 MD(11195.00) Inc(89.6) Azm(0.0) TVD(7245.91) DLS(0.7)

#117 MD(11290.00) Inc(91.5) Azm(1.0) TVD(7244.98) DLS(2.3)

#118 MD(11386.00) Inc(90.0) Azm(359.6) TVD(7243.72) DLS(2.1)

#119 MD(11481.00) Inc(93.2) Azm(1.2) TVD(7241.07) DLS(3.7)

#120 MD(11577.00) Inc(92.2) Azm(0.6) TVD(7236.53) DLS(1.2)

#121 MD(11672.00) Inc(91.6) Azm(359.7) TVD(7233.37) DLS(1.1)

#122 MD(11768.00) Inc(91.0) Azm(359.8) TVD(7231.26) DLS(0.6)

#123 MD(11863.00) Inc(90.1) Azm(359.8) TVD(7230.38) DLS(0.9)

#124 MD(11959.00) Inc(89.4) Azm(359.6) TVD(7230.81) DLS(0.8)

#125 MD(12054.00) Inc(90.9) Azm(1.6) TVD(7230.57) DLS(2.6)

#126 MD(12150.00) Inc(90.8) Azm(1.4) TVD(7229.17) DLS(0.2)

#127 MD(12245.00) Inc(90.4) Azm(0.6) TVD(7228.20) DLS(0.9)

#128 MD(12341.00) Inc(90.8) Azm(0.8) TVD(7227.22) DLS(0.5)

#129 MD(12436.00) Inc(90.3) Azm(358.0) TVD(7226.34) DLS(3.0)

#130 MD(12532.00) Inc(91.3) Azm(358.1) TVD(7224.98) DLS(1.1)

#131 MD(12627.00) Inc(91.3) Azm(0.1) TVD(7222.76) DLS(2.1)

#132 MD(12723.00) Inc(91.8) Azm(0.1) TVD(7220.09) DLS(0.5)

#133 MD(12819.00) Inc(92.5) Azm(1.8) TVD(7216.48) DLS(1.9)

#134 MD(12914.00) Inc(92.6) Azm(1.2) TVD(7212.31) DLS(0.6)

#135 MD(13009.00) Inc(92.5) Azm(0.4) TVD(7208.09) DLS(0.9)

#136 MD(13105.00) Inc(92.3) Azm(2.2) TVD(7204.05) DLS(1.9)

#137 MD(13200.00) Inc(92.5) Azm(1.4) TVD(7200.11) DLS(0.9)

#138 MD(13296.00) Inc(91.0) Azm(1.5) TVD(7197.20) DLS(1.5)

#139 MD(13391.00) Inc(91.2) Azm(0.9) TVD(7195.34) DLS(0.7)

#140 MD(13487.00) Inc(90.7) Azm(0.5) TVD(7193.75) DLS(0.7)

#141 MD(13582.00) Inc(91.1) Azm(0.1) TVD(7192.27) DLS(0.7)

#142 MD(13678.00) Inc(91.3) Azm(1.0) TVD(7190.21) DLS(1.0)

#143 MD(13773.00) Inc(89.8) Azm(0.8) TVD(7189.24) DLS(1.6)

#144 MD(13869.00) Inc(90.0) Azm(359.9) TVD(7189.38) DLS(1.0)

#145 MD(13964.00) Inc(89.5) Azm(359.1) TVD(7189.75) DLS(0.9)

#146 MD(14060.00) Inc(91.7) Azm(359.9) TVD(7188.67) DLS(2.4)

#147 MD(14155.00) Inc(92.4) Azm(359.5) TVD(7185.23) DLS(0.9)

#148 MD(14251.00) Inc(90.3) Azm(0.6) TVD(7182.98) DLS(2.5)

#149 MD(14343.00) Inc(90.4) Azm(0.2) TVD(7182.44) DLS(0.5)

#150 MD(14436.00) Inc(90.7) Azm(2.3) TVD(7181.53) DLS(2.3)

#151 MD(14528.00) Inc(91.1) Azm(2.0) TVD(7180.10) DLS(0.5)

#152 MD(14621.00) Inc(90.8) Azm(1.6) TVD(7178.55) DLS(0.5)

#153 MD(14713.00) Inc(90.6) Azm(1.0) TVD(7177.43) DLS(0.7)

#154 MD(14806.00) Inc(90.7) Azm(0.9) TVD(7176.43) DLS(0.2)

#155 MD(14902.00) Inc(90.2) Azm(0.2) TVD(7175.74) DLS(0.9)

#156 MD(14997.00) Inc(92.5) Azm(0.6) TVD(7173.51) DLS(2.5)

#157 MD(15093.00) Inc(92.1) Azm(1.4) TVD(7169.62) DLS(1.0)

#158 MD(15188.00) Inc(92.3) Azm(0.5) TVD(7165.95) DLS(1.0)

#159 MD(15284.00) Inc(90.7) Azm(0.3) TVD(7163.46) DLS(1.7)

#160 MD(15379.00) Inc(90.8) Azm(359.8) TVD(7162.26) DLS(0.5)

#161 MD(15474.00) Inc(90.2) Azm(0.9) TVD(7161.43) DLS(1.4)

#162 MD(15570.00) Inc(90.4) Azm(0.5) TVD(7160.92) DLS(0.5)

#163 MD(15665.00) Inc(89.8) Azm(0.1) TVD(7160.74) DLS(0.7)

#164 MD(15761.00) Inc(90.3) Azm(1.7) TVD(7160.59) DLS(1.8)

#165 MD(15856.00) Inc(91.0) Azm(1.4) TVD(7159.52) DLS(0.7)

#166 MD(15952.00) Inc(90.1) Azm(0.7) TVD(7158.68) DLS(1.2)

#167 MD(16047.00) Inc(91.3) Azm(1.7) TVD(7157.53) DLS(1.7)

#168 MD(16142.00) Inc(90.7) Azm(1.1) TVD(7155.82) DLS(0.9)

#169 MD(16238.00) Inc(90.6) Azm(0.5) TVD(7154.70) DLS(0.6)

#170 MD(16333.00) Inc(91.0) Azm(1.4) TVD(7153.42) DLS(1.0)

#171 MD(16429.00) Inc(90.6) Azm(0.7) TVD(7152.10) DLS(0.8)

#172 MD(16524.00) Inc(92.3) Azm(0.9) TVD(7149.68) DLS(1.8)

#173 MD(16619.00) Inc(92.0) Azm(0.7) TVD(7146.11) DLS(0.4)

#174 MD(16715.00) Inc(91.8) Azm(359.8) TVD(7142.88) DLS(1.0)

#175 MD(16810.00) Inc(91.6) Azm(359.5) TVD(7140.00) DLS(0.4)

#176 MD(16906.00) Inc(91.3) Azm(359.1) TVD(7137.56) DLS(0.6)

#177 MD(17001.00) Inc(90.5) Azm(1.1) TVD(7136.12) DLS(2.3)

#178 MD(17096.00) Inc(90.1) Azm(0.6) TVD(7135.66) DLS(0.7)

#179 MD(17192.00) Inc(89.9) Azm(0.1) TVD(7135.68) DLS(0.6)

#180 MD(17287.00) Inc(89.5) Azm(359.7) TVD(7136.21) DLS(0.5)

#181 MD(17383.00) Inc(90.3) Azm(359.6) TVD(7136.35) DLS(0.9)

#182 MD(17478.00) Inc(89.8) Azm(359.2) TVD(7136.21) DLS(0.7)

#183 MD(17574.00) Inc(91.1) Azm(1.4) TVD(7135.41) DLS(2.7)

#184 MD(17669.00) Inc(90.5) Azm(0.7) TVD(7134.07) DLS(1.0)

#185 MD(17765.00) Inc(91.1) Azm(0.8) TVD(7132.76) DLS(0.6)

#186 MD(17860.00) Inc(91.1) Azm(0.8) TVD(7131.00) DLS(0.0)

#187 MD(17956.00) Inc(91.3) Azm(0.5) TVD(7128.99) DLS(0.4)

#188 MD(18051.00) Inc(90.6) Azm(359.5) TVD(7127.37) DLS(1.3)

#189 MD(18201.00) Inc(90.5) Azm(357.7) TVD(7125.90) DLS(1.2)

#190 MD(18296.00) Inc(90.7) Azm(358.3) TVD(7124.88) DLS(0.7)

#191 MD(18392.00) Inc(90.3) Azm(358.7) TVD(7123.98) DLS(0.6)

#192 MD(18487.00) Inc(91.6) Azm(359.6) TVD(7122.36) DLS(1.6)

#193 MD(18583.00) Inc(91.4) Azm(1.0) TVD(7119.83) DLS(1.5)

#194 MD(18678.00) Inc(90.9) Azm(0.6) TVD(7117.92) DLS(0.7)

#195 MD(18774.00) Inc(90.1) Azm(1.7) TVD(7117.12) DLS(1.4)

#196 MD(18869.00) Inc(89.7) Azm(1.3) TVD(7117.35) DLS(0.6)

#197 MD(18965.00) Inc(90.8) Azm(2.4) TVD(7116.98) DLS(1.6)

#198 MD(19060.00) Inc(90.5) Azm(2.4) TVD(7115.92) DLS(0.3)

#199 MD(19155.00) Inc(89.6) Azm(2.5) TVD(7115.83) DLS(0.9)

#200 MD(19251.00) Inc(91.2) Azm(1.6) TVD(7115.13) DLS(1.9)

#201 MD(19346.00) Inc(90.6) Azm(1.3) TVD(7113.64) DLS(0.8)

#202 MD(19442.00) Inc(92.9) Azm(1.5) TVD(7110.78) DLS(2.4)

#203 MD(19538.00) Inc(92.4) Azm(1.8) TVD(7106.36) DLS(0.5)

#204 MD(19633.00) Inc(92.2) Azm(2.3) TVD(7102.56) DLS(0.6)

#205 MD(19728.00) Inc(91.8) Azm(0.9) TVD(7099.27) DLS(1.5)

#206 MD(19824.00) Inc(91.7) Azm(1.4) TVD(7096.36) DLS(0.5)

#207 MD(19919.00) Inc(91.2) Azm(1.9) TVD(7093.95) DLS(0.7)

#208 MD(20015.00) Inc(91.1) Azm(0.6) TVD(7092.03) DLS(1.4)

#209 MD(20110.00) Inc(90.5) Azm(0.9) TVD(7090.74) DLS(0.7)

#210 MD(20206.00) Inc(91.5) Azm(359.9) TVD(7089.10) DLS(1.4)

#211 MD(20301.00) Inc(91.3) Azm(0.4) TVD(7086.82) DLS(0.5)

#212 MD(20397.00) Inc(91.1) Azm(0.8) TVD(7084.85) DLS(0.5)

#213 MD(20492.00) Inc(91.2) Azm(1.2) TVD(7082.99) DLS(0.4)

#214 MD(20588.00) Inc(91.1) Azm(1.5) TVD(7081.07) DLS(0.3)

#215 MD(20683.00) Inc(90.8) Azm(1.8) TVD(7079.44) DLS(0.5)

#216 MD(20716.00) Inc(90.8) Azm(2.0) TVD(7078.97) DLS(0.4)